

Work Order ID 87796

\*87796\*

Page 1

July-12-12 9:00:45 AM

Item ID: D105-674-011G

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Skidtube, Grey

Start Date: 7/12/12 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 7/20/12 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: W Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2966	Rev A2

100 0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D105-674-011G CHG002

*DAS 16 2-83* *relate* *for MJS 12-7-25*

130 0.00

\*130\*

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

\*\* Pull D2966-1 bent \*\*

1-Cut Aft end at 107.06" using DT8185D  
2-Deburr ends  
3-Drill Aft Cap holes using DT8678  
4-Locate DT8679 with 1/8 clecos in Aft Cap holes. Ensure DT8679 is centered on Fwd end of tube and drill #40 Fwd bushing.  
5-Clamp DT8679 to the tube. Drill all #30 wearplate and crossbolt holes.  
6-Open Aft Cap holes using #6 drill  
7-Open wearplate holes and two side holes to Ø19/64" (0.297") as per Dwg D2966-1.  
8-Deburr holes.  
9-Open remaining (16) crossbolt holes to Ø0.500

*SAD 12-07-12*

**B87796**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**\*877.96\***

July-12-12 9:00:45 AM

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 7/12/12      **Start Qty:** 1.00      **\*1\***

**Cust Item ID:**

**Required Date:** 7/20/12      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

**Reference:**

Run Start \*NR1\*

**Approvals:**      **Process Plan:** \_\_\_\_\_      **Date:** \_\_\_\_\_      **Tooling:** \_\_\_\_\_      **Date:** \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

**\*140\***

## Skidtubes

0.00

## Skidtubes

## Memo

## Skidtubes

1-Weld Fwd Cap as per Dwg D2966 and QSI 004. Fill #40 Fwd cleco hole. *A/R m120164*  
2-Grind Fwd Cap welds flush *SA 13-07-01*

2-Grind Fwd Cap welds flush

SAD 12-07-16

150

QC10- Inspect visual per QSI004- ground welds

0.00,

**\*150\***

0.00

QC

## Memo

## Quality Control

160

QC5- Inspect part completeness to step on W/O

0.00

**\*160\***

0.00

OC

## Memo

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 87796

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July-12-12 9:00:45 AM

Item ID: D105-674-011G

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Skidtube, Grey

Start Date: 7/12/12 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 7/20/12 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*170*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
180	QC7-Inspect Chemical Conversion Coat	0.00							
<b>*180*</b>									
QC	Memo	0.00							
Quality Control									
190	Skidtubes	0.00							
<b>*190*</b>									
Skidtubes	Memo	0.00							
Skidtubes	1-Open crossbolt holes to finish size as per Dwg D2966 2-Open 14 holes to Ø0.750" & 2 holes to Ø0.875", countersink crossbolt holes & remove alodine to prepare for welding as per Dwg D2966 3-Deburr holes inside & outside, blow out chips								

DAS  
03  
2-89

DP 12-7-17

DL 12/02/17

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 87796

**\*87796\***

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July-12-12 9:00:45 AM

Item ID: D105-674-011G Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Skidtube, Grey  
 Start Date: 7/12/12 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 7/20/12 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Skid tubes	0.00							
<b>*200*</b>									
Skidtubes	Memo	0.00							
Skidtubes	1-Bond Web in place per QSI 015. (Ensure holes line up) Pick: A/R Sikaflex-291 batch: <u>120130</u> Sikaflex expiry date: <u>13-3-14</u> start time: <u>18:45</u> end time: <u>12-07-19</u>								
	2-Weld Crossbolt Spacers as per Dwg D2966 and QSI 004. For crossbolt spacer, weld one side, pass 5/8" drill; weld other side, pass 5/8" drill. Pick: A/R Aluminum Rod batch: <u>m120164/m122324</u>								
	3-Pass Ø0.630" drill to remove spillover for D2973 crossbolt. Pass Ø0.750" drill to remove spillover for D2971 crossbolt.								
	4-Grind welds flush as per Dwg D2966								
210	QC10- Inspect visual per QSI004- ground welds	0.00							
<b>*210*</b>									
QC	Memo	0.00							
Quality Control									

DAS  
16  
9-2

12/07/19

DC 12/07/18

BE 12-07-19

DD 12-7-18

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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July-12-12 9:00:45 AM

Item ID: D105-674-011G

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\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Skidtube, Grey

Start Date: 7/12/12 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 7/20/12 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC5- Inspect part completeness to step on W/O	0.00							
*220*									
QC	Memo	0.00							
Quality Control									
225	Touch up alodine	0.00							
*225*									
HandFinish	Memo	0.00							
Hand Finishing									
226	Assemble as per dwg	0.00							
*226*									
HandFinish	Memo	0.00							
Hand Finishing	INSTALL ALS7-1032-130, MS27039-1-08, AN960JD10L IN TWO PLACES BEFORE POWDERCOATING								



Handwritten 'X' and 'Q' marks

Handwritten signature 'mf' and date '12/27/19'

Handwritten signature 'Muloz' and date '12/27/19'

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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July-12-12 9:00:45 AM

Item ID: D105-674-011G Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Skidtube, Grey  
 Start Date: 7/12/12 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 7/20/12 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description:	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 <b>*230*</b> Powdercoat Powder Coating M121279	Grey Sandtex(Ref:4.3.5.6) per QS1005 4.3  Memo START TIME: 2:00 OVEN TEMPERATURE: 320°F FINISH TIME: 2:30	0.00 0.00				1X	0		M/A 12/07/19
240 <b>*240*</b> QC Quality Control	QC3- Inspect Part Finish  Memo	0.00 0.00				1X	f	ll	12/07/23

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 87796

**\*87796\***

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July-12-12 9:00:45 AM

Item ID: D105-674-011G

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**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Skidtube, Grey

Start Date: 7/12/12 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 7/20/12 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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250

**\*250\***

HandFinish

Hand Finishing

HandFinishing

Memo

0.00

1-Inspect for foreign objects as per QSI 024

2-Install Inserts, Wearplate and Cap per Dwg D2966. Insert a drop of sikaflex at insert holes before installing wearplates. Seal Aft Cap using Sikaflex. Install bushing and nut. By looking Fwd, install nut to right hand side.

Pick:

QtyPart NumberDescriptionBatch

A/RSikaflex-291 11121531

Sikaflex expiry date: 12/08

3-Wing Walk as per Dwg D2966 and QSI 005 4.4

Batch: 11122320

10 10 11/07/12

260

**\*260\***

QC

Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

DAS  
16  
9-8 12/07/12

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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July-12-12 9:00:45 AM

**\*87796\***

Page 8

Item ID: D105-674-011G

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**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

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Item Name: Skidtube, Grey

Start Date: 7/12/12 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 7/20/12 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	QC5- Inspect part completeness to step on W/O	0.00							
<b>*270*</b>									
QC	Memo	0.00							
Quality Control	*****ENSURE INSERT ARE AT LOCATION (6) AS PER DWG D2966*****								
280	Pick Kit	0.00							
<b>*280*</b>									
Packaging	Memo	0.00							
Packaging									
290	QC4- 100% Inspect kits for completeness	0.00							
<b>*290*</b>									
QC	Memo	0.00							
Quality Control									

*DAS 16 9-83 12/14/12*

*1 12/07/25 JB*

*DAS 16 9-83 12/14/26*

*FL*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 7/12/12 Start Qty: 1.00

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300	Packaging	0.00							
<b>*300*</b>									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D105-674-011G Location: _____								
310	QC21- Final Inspection - Work Order Release	0.00							
<b>*310*</b>									
QC	Memo	0.00							
Quality Control									

*Per 7/26/12*

*12/7/30*

*ME 12-07-27*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

July-12-12 9:00:44 AM

Page 1

Work Order ID: 87796

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Start Date: 7/12/12

Required Date: 7/20/12

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A04.07.07New IssueKJ/JLM

IPP Rev:B 10.06.09 remove seq110 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2966-1-BENT Skidtube Assembly 105		Manufactured	No			130	Each	2.0000	1				
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		2							
				83295		1							
				83783		1							
D2964 Cap		Manufactured	No			140	Each	29.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		12							
				83064		12							
				LG002		17							
				74719		17							
D2976 BO 105 Skidtube I Beam		Manufactured	No			200	Each	0.0000	1				
D2971 Cross Bolt Spacer		Manufactured	No			200	Each	22.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG001		22							
				74720		22							
D2973 Cross Bolt Spacer		Manufactured	No			200	Each	64.0000	7	7			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG002		64							
				14636		14							
				80092		50							

SAD 12/07/12

①

BE12/07/16

12/07/18

①

BE12/07/19

BE12/07/19

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

July-12-12 9:00:44 AM

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Work Order ID: 87796

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Start Date: 7/12/12

Required Date: 7/20/12

Start Qty: 1.00

Required Qty: 1.00

<b>D2965</b> Cap, 105 Skidtube	Manufactured	No	250	Each	44.0000	1	<u>12/07/23</u>
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>		
	FP002		44		B87959	✓	
	71371		4				
	80089		40				
<b>D2970-1</b> Wearplate	Manufactured	No	250	Each	8.0000	1	<u>12/07/23</u>
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>		
	FP001		8				
	48213		3				
	80090		5			X	
<b>D2970-3</b> Wearplate	Manufactured	No	250	Each	9.0000	1	<u>12/07/23</u>
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>		
	FP001		1				
	48214		1				
	FP002		8				
	80091		8			X	
<b>D3176-1</b> Bushing	Manufactured	No	250	Each	6.0000	1	<u>12/07/23</u>
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>		
	ST032		6				
	37586		6			X	
<b>D3176-3</b> Nut	Manufactured	No	250	Each	9.0000	1	<u>12/07/23</u>
	<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>		
	ST032		9				
	44896		9			X	

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**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 3

Work Order ID: 87796

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Start Date: 7/12/12

Required Date: 7/20/12

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

250

Each

1,520.0000

36

36

Insert

Location

Loc Qty

Loc Code

ST280

51

117717

27

118966

22

119775

2

ST282

1469

119530

73

120181

12

121444

1384

X36

MS27039-1-08

Purchased

No

250

Each

1,168.0000

26

26

Screw

Location

Loc Qty

Loc Code

ST291

1168

117423

81

119075

1

120308

166

121011

43

121243

500

121708

377

X26

AN960JD10L

NAS1149D0332J

Purchased

No

250

Each

0.0000

28

28

Washer

N1121011

MS27039-1-09

Purchased

No

250

Each

267.0000

2

2

Screw

Location

Loc Qty

Loc Code

FP002

93

18057

93

ST291

174

111650

174

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Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

July-12-12 9:00:44 AM

Page 4

Work Order ID: 87796

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Start Date: 7/12/12

Required Date: 7/20/12

Start Qty: 1.00

Required Qty: 1.00

8 D2972 Bushings	Manufactured	No	290	Each	27.0000	6	6	JB	
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			ST022	27					
			33544	4					
			44160	23		44160			
8 D2974 Packer	Manufactured	No	290	Each	37.0000	1	1	JB	
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			ST022	37					
			71997	37		71997			
8 D2975 Wearshoe	Manufactured	No	290	Each	4.0000	2	2	JB	
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			ST497A	2					
			74721	2					
			ST500	2					
			80093	2		80093			
8 AN4-51A Bolt	Purchased	No	290	Each	526.0000	3	3	JB	
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			362	96					
			121181	96					
			ST361	430					
			119798	30					
			122151	400		122151			
8 AN960JD10L Washer	Purchased	No	290	Each	0.0000	8	8	JB	12/07/25
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			NAS1149D0332J			121908			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 5

Work Order ID: 87796

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Start Date: 7/12/12

Required Date: 7/20/12

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Nut

Purchased

No

290

Each

914.0000

3

3

Location

Loc Qty

Loc Code

ST300

914

119075

116

121011

193

121444

605

MS27039-1-08

Screw

Purchased

No

290

Each

1,168.0000

8

8

Location

Loc Qty

Loc Code

ST291

1168

117423

81

119075

1

120308

166

121011

43

121243

500

121708

377

121444

122452

JB 12/07/25

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# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries



DESIGN RF	DRAWN BY RF	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED #	APPROVED #	DRAWING NO. D2966	REV. A SHEET 1 OF 2
DATE 00.03.08		TITLE BO 105 SKIDTUBE ASSEMBLY	SCALE NTS
A	00.03.08	NEW ISSUE	

RELEASED  
00.05.11 #

Qty	Part Number	Description
X	D2966-041	SKIDTUBE ASSEMBLY
1	D2962-125	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2970-1	WEARPLATE
1	D2970-3	WEARPLATE
1	D2971	CROSS BOLT SPACER
7	D2973	CROSS BOLT SPACER
1	D2976	WEB
36	ALS7-1032-130 or ALS4-1032-130 or AKS7-1032-130 or AKS4-1032-130	INSERT
28	AN960JD10L	WASHER
26	MS27039-1-08	SCREW
2	MS27039-1-09	SCREW
1	D3176-1	BUSHING
1	D3176-3	NUT



al087796

#### GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) WELDING TO BE DONE PER DART QSI 004.
- 3) INSERT D2976 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 4) USE DART DRILL TEMPLATE DT8451 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION B-B (34 PLACES) AFTER FINISH. SEAL WEARPLATE SCREWS WITH SIKAFLEX-241/-291.
- 5) DO NOT INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN THESE LOCATIONS.
- 6) INSTALL ALS7-1032-130 INSERT, MS27039-1-08 SCREW, AND AN960JD10L WASHER IN 2 PLACES THIS LOCATION BEFORE POWDER COATING.
- 7) FINISH:  
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2976 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4 (OPTIONAL) BLACK SANDTEX (REF 4.3.5.7)



# 01.01.24  
CP 01.01.30

A2	02.10.30	ADD D3176-1/-3	# CP
A1	01.01.24	CHANGE COLOR TO BLACK SANDTEX	# CP

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



NO. 259

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: B68574  
Part number: D105-674-0110  
Description: ICS  
Welding Process: Tig~~[ ]~~ Mig~~[ ]~~  
Base material: Aluminum  
Current: AC~~[ ]~~ DC~~[ ]~~

TEST REQUIREMENTS AND RESULTS

Visual: pass~~[ ]~~ fail~~[ ]~~  
Penetration: pass~~[ ]~~ fail~~[ ]~~

UNACCEPTABLE

Cracks: pass~~[ ]~~ fail~~[ ]~~  
Undercut: pass~~[ ]~~ fail~~[ ]~~  
Pin holes: pass~~[ ]~~ fail~~[ ]~~  
Overlap (cold lap): pass~~[ ]~~ fail~~[ ]~~  
Porosity (surface): pass~~[ ]~~ fail~~[ ]~~  
Coloration: pass~~[ ]~~ fail~~[ ]~~

Qualifier Sal Davis Date of Test Coupon 11.06.30  
Welder Barclay Elliott Date of Test Coupon 11.06.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld